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Scientific Note

Invasion of Southern California by the Palearctic pyrrhocorid *Scantius aegyptius* (Hemiptera: Heteroptera: Pyrrhocoridae)

The Palearctic pyrrhocorid *Scantius aegyptius* Linnaeus 1758 (Hemiptera: Pyrrhocoridae) has recently been discovered at numerous localities in Southern California, representing the first New World records for this species. One specimen of this species was discovered on 13 June 2009 by Doug Peltz in Fremont Canyon, Orange County, CA (Fig. 1a; 9° 33'47"23.00" N, 117°43'38.55" W), and a colony of the same species was found on 2 July 2009 by Trudy Ferris, Park Ranger for California State Parks, on No-name Ridge in Crystal Cove State Park, Laguna Beach, CA (Fig. 1a; 7° 33'34"27.65" N, 117°48'58.24" W). Portia Arutunian and I confirmed the latter report on 6 July 2009 and photographed nymphs and adults (Fig. 1b, c) feeding on dry seed pods of cheeseweed, *Malva parviflora* Linnaeus (Malvaceae). The insects were also photographed mating, being captured by ants (*Messor* sp.) (Formicidae) and apparently engaging in cannibalism (Bryant 2009). The No-name Ridge colony is on very dry land adjacent to a hiking trail, and the insects were also observed entering and leaving cracks in the ground. On 16 July 2009 another colony was found on Poles Trail in the same park (Fig. 1a; 8° 33'34"25.53" N, 117°48'40.57" W) and confirmed on 17 July 2009.

Harsi Parker (personal communication) found specimens of this species on 4 July 2009 at 34° 9'5.22" N 117°44'13.01" W in Webb Canyon (Fig. 1a; 2), an unincorporated area north of Claremont and La Verne in Los Angeles County. She returned to this location on 20 July 2009 and discovered thousands of individuals at the same site. They were abundant above ground only during the cooler parts of the day. There were some dried remnants of large stands of cheeseweed that were previously present at this site, and the bugs appeared to be feeding on seeds that had fallen into cracks and crevices.

Public awareness of this new arrival was generated by email networks, an article in the Orange County Register on 3 August 2009, and a local television news item on 5 August 2009. At least in part due to these communications, we received reports of *S. aegyptius*, documented by photographs and/or specimens, at over 35 sites in Orange, San Bernardino, Los Angeles and Riverside counties during the period June–August 2009 (Fig. 1a and Table 1). At a few sites, reports indicate that the colonies may have contained thousands or even millions of individuals. One report, not photo-documented, indicates that there was a colony in Huntington Beach as early as 2007, and other undocumented reports show the species at San Clemente in February and at Starr Ranch in April 2009.

Prior to this report, *Scantius aegyptius* was known only from the Canary Islands, the Mediterranean and Black Sea basins, the Caucasus, and Central Asia (Awad & Önder 1997, Kerzhner 2001). All members of the family Pyrrhocoridae were previously restricted to the Old World, with the exception of the cotton stainers (*Dysdercus* spp. Linnaeus) of which 36 species have been reported from the western hemisphere (Van Doesburg 1968) including eight species from the southern U.S. (Henry & Froeschner 1988).

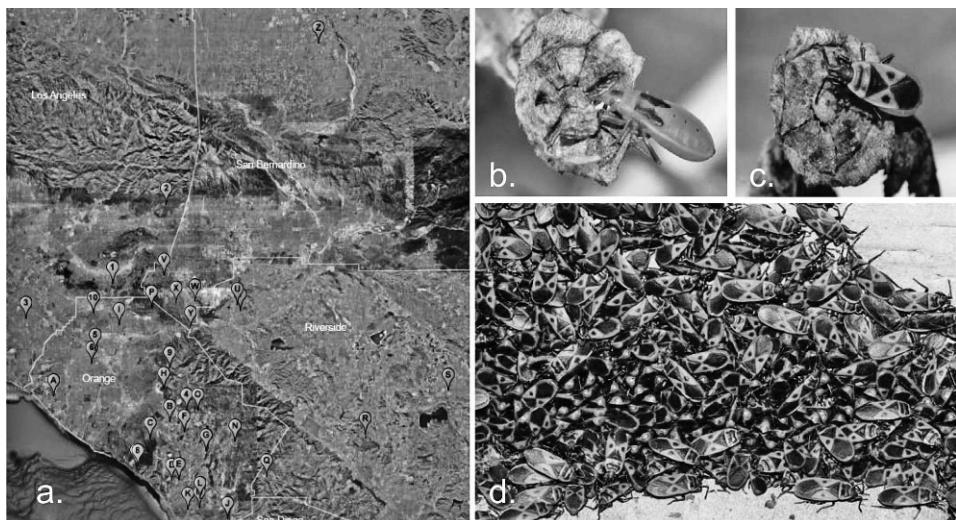


Figure 1. a: Locations (In red, 1–10 and A–Z; arbitrarily designated) of *Scantius aegyptius* records in Southern California, 2009, compiled using Google Earth. Counties shown in yellow. b: Nymph (5mm body length) and c: Adult (8mm body length) of *Scantius aegyptius* feeding on seed pods of *Malva parviflora* in Crystal Cove State Park, Orange County, California, 6 July 2009. d: Swarm of *Scantius aegyptius* on a fence in San Clemente, Orange County, California, 31 October 2009.

Although some pyrrhocorids are serious pests of cotton (Schaefer & Ahmad 2000) *S. aegyptius* is not considered a plant pest and does not appear to pose any serious threats to the environment or to agriculture. In Turkey, it has been recorded on Beans, *Phaseolus* Linnaeus (Fabaceae), Pistacio, *Pistacia* Linnaeus (Anacardiaceae) and relatives of marshmallow, *Althaea* Linnaeus (Malvaceae), and in Pakistan it was found on grasses and wheat (Ahmad & Abbas, 2009). The plant associated with most of the colonies described here (*Malva parviflora*) is also a weed of European origin. Many other exotic insect species have been introduced accidentally on their host plants (Vázquez & Simberloff 2001) and this might also be true of *S. aegyptius*.

Seventy six species of heteropterans (Vázquez & Simberloff 2001) are among over 4500 non-native species of arthropods that have been introduced to the United States (Pimentel et al. 2002), but aside from *Dysdercus*, the only previous record of the family Pyrrhocoridae in the Americas is a report of two male specimens of the otherwise European *Pyrrhocoris apterus* found in an 1896 collection from Snake Hill, New Jersey (Barber 1911). Even these specimens have been excluded from the authoritative North American catalog of heteropterans (Henry & Froeschner 1988).

Voucher specimens from the *Scantius* colony at No-name Ridge have been deposited in the California State Collection of Arthropods in Sacramento, California, and the National Museum of Natural History, Smithsonian Institution, Washington, D.C.

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I thank Winter Bonnin and Rick Connella (Crystal Cove State Park, Laguna Beach, CA) for bringing the No-name Ridge colony to my attention and Portia Arutunian (Orange County Parks) for helping me to find it. Thanks also to Harsi

Table 1. Records of *Scantius aegyptius* in southern California, 2009. Record numbers correspond to those in Figure 1. *Undocumented report shows presence in 2007. +, photos are from later dates than the first record.

Name of contact/collector	City	County	Month of first record	Documentation	Record # (Fig. 1)
Stephanie Chen	Rowland Heights	Los Angeles	8/09	Photo	1
Harsi Parker	Webb Cyn. (uninc.)	Los Angeles	7/09	Photo	2
Debbie Rose	Bellflower	Los Angeles	8/09	Photo	3
Doug Peltz	Agua Chinon	Orange	7/09	Photo	4
Wes Allen	Anaheim	Orange	8/09	Photo	5
Dana Wright	Anaheim	Orange	8/09	Photo	6
Rick Connella	Crystal Cove State Park	Orange	6/09	Photo (PB)	7
Rick Connella	Crystal Cove State Park	Orange	6/09	Photo (PB)	8
Doug Peltz	Fremont Canyon	Orange	6/09	Photo	9
Nick Nisson / M. Amador	Fullerton	Orange	6/09	Specimens	10
Clay Norris	Huntington Beach	Orange	*8/09	Photo	A
Greg Piazza	Irvine	Orange	7/09	Specimens	B
Charlene Stenger	Irvine	Orange	8/09	Photo	C
Peter Bryant	Laguna Niguel	Orange	8/09	Photo (PB)	D
Lana Simning	Laguna Niguel	Orange	8/09	Photo	E
Robert Lovejoy	Lake Forest	Orange	7/09	Photo	F
Ramsey Azzouni	Mission Viejo	Orange	7/09	Photo	G
Peter Wetzel	Orchard Hills	Orange	8/09	Photo, specimen	H
Annalisa Rivera	Placentia	Orange	7/09	Photo	I
Matt Boothe	San Clemente	Orange	2/09	+Photo	J
Pat Finnerty	San Juan Capistrano	Orange	8/09	Photo	K
Jann Harmon	San Juan Capistrano	Orange	7/09	Photo	L
Tracy Van Wie	San Juan Capistrano	Orange	7/09	Photo	M
Scott Gibson	Starr Ranch	Orange	4/09	+Photo	N
Megan McMannis	Whiting Ranch	Orange	6/09	Photo	O
Frank Asbury	Chino Hills State Park	Orange	8/09	Photo	P
Nick Nisson / Phyllis Joseph	Unincorporated	Riverside	6/09	Specimens	Q
Knud Olesen	Menifee	Riverside	5/09	Photo	R
C.Allison/ C.Laughy	Hemet	Riverside	9/09	Photo	S
Suzie Strelecki	Norco	Riverside	7/09	Photo	T
Ingrid Wicken	Norco	Riverside	6/09	Photo	U
Larry Klementowski	Chino Hills	San Bernardino	8/09	Photo	V
Nick Nisson / Denis Whitfill	Chino Hills	San Bernardino	7/09	Specimen	W
Loree Magnan	Chino Hills	San Bernardino	7/09	Photo	X
Bill Gerken	Prado Dam	San Bernardino	8/09	Photo (PB)	Y
Joshua Salazar	Victorville	San Bernardino	7/09	Photo	Z

Parker (Contributing Editor, Bugguide) and Vassili Belov (Contributor, Bugguide) for useful comments and additional information, and especially to Jutta Burger (Senior Field Ecologist, Irvine Ranch Conservancy) for helping to compile the records of this species. The species identification has been verified by Rosser

Garrison (Senior Biosystematist, California Department of Food and Agriculture) from specimens collected in San Juan Capistrano and provided by Orange County entomologist Nick Nisson.

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